

We claim:

1. A freeze dried pharmaceutical formulation comprising a porphyrin photosensitizer, a disaccharide or polysaccharide, and one or more phospholipids which formulation, upon addition of a suitable aqueous vehicle, forms liposomes containing a therapeutically acceptable amount of said porphyrin photosensitizer.

2. A pharmaceutical liposomal formulation formed upon addition of a suitable aqueous vehicle to the freeze-dried formulation according to claim 1.

3. A pharmaceutical formulation according to claim 1 wherein said formulation comprises a porphyrin photosensitizer, a disaccharide or polysaccharide, a phosphatidyl choline and a phosphatidyl glycerol.

4. A pharmaceutical formulation according to claim 1 or 3 wherein said disaccharide or polysaccharide is selected from lactose or trehalose.

5. A pharmaceutical formulation according to claims 1, 3 or 4 wherein the concentration ratio of disaccharide or polysaccharide to phospholipid is about 10-20 to 0.5-6.

6. A pharmaceutical formulation of claims 1, 2, 3, 4 or 5 wherein said porphyrin photosensitizer is a hydro-monobenzoporphyrin (Gp) of the formulae set forth in Figure 1 having a light absorption maximum between 670-780 nm; and mixtures thereof and the metalated and labeled forms thereof,

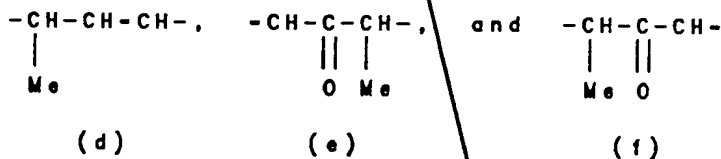
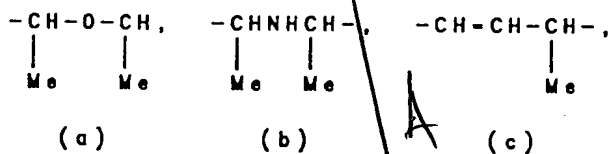
wherein each R^1 and R^2 is independently selected from the group consisting of carbalkoxy (2-6C), alkyl (1-6C) sulfonyl, aryl (6-10C) sulfonyl, aryl (6-10C); cyano; and $-CONR^5CO-$ wherein R^5 is aryl (6-10C) or alkyl (1-6C);

each R^3 is independently carboxyalkyl (2-6C) or a salt, amide, ester or acylhydrazone thereof, or is alkyl (1-6C); and

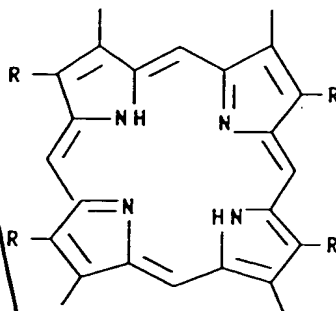
R^4 is $CHCH_2$, $CHOR^{4'}$, $-CHO$, $-COOR^{4'}$, $CH(OR^{4'})CH_3$, $CH(OR^{4'})CH_2OR^{4'}$, $-CH(SR^{4'})CH_3$, $-CH(NR^{4'})CH_3$, $-CH(CN)CH_3$, $-CH(COOR^{4'})CH_3$, $-CH(OOCR^{4'})CH_3$, $-CH(halo)CH_3$, or $-CH(halo)CH_2(halo)$, wherein $R^{4'}$ is H, alkyl (1-6C) optionally substituted with a hydrophilic substituent, or

wherein R^4 is an organic group of less than 12C resulting from direct or indirect derivatization of vinyl, or

wherein R^4 consists of 1-3 tetrapyrrole-type nuclei of the formula -L-P wherein -L- is selected from the group consisting of



and P is selected from the group consisting of Gp which is of the formula 1-6 but lacking R^4 and conjugated through the position shown as occupied by R^4 to L, and a porphyrin of the formula:



wherein each R is independently H or lower alkyl (1-4C);

wherein two of the bonds shown as unoccupied on adjacent rings are joined to R³ and one of the remaining bonds shown as unoccupied is joined to R⁴ and the other to L;

with the proviso that if R⁴ is CHCH₂, both R³ cannot be carbalkoxyethyl.

7. The formulation of claim 6 wherein each R³ is -CH₂CH₂COOH or salt, amide, ester or acylhydrazone thereof.

8. The formulation of claim 6 wherein each of R¹ and R² is carbalkoxy (2-6C).

9. The formulation of claim 7 wherein each of R¹ and R² is carbalkoxy (2-6C).

10. The formulation of claim 7 wherein the Gp has the formula 3 or 4 of Figure 2.

11. The formulation of claim 9 wherein the Gp has the formula 3 or 4 of Figure 2.

12. A pharmaceutical formulation according to claim 1 further containing an antioxidant.

13. A pharmaceutical formulation according to claim 1 in association with a pharmaceutically acceptable adjuvant or excipient.

14. The formulation of claims 1 or 2 wherein the therapeutically effective concentration of the

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Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
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